

Cat. No. 14-1180  
**OWNER'S MANUAL**

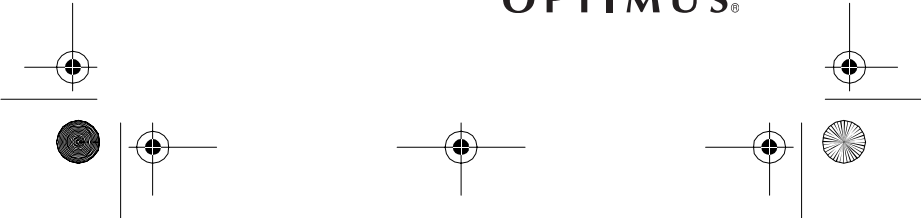
Please read before using this equipment.

**MICRO-32**

**Microcassette Tape  
Recorder with Voice  
Activation and Counter**



**OPTIMUS®**





## FEATURES

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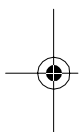
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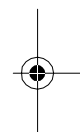
Your Optimus Micro-32 Microcassette Tape Recorder with Voice Activation and Counter is lightweight, compact, and easy to operate. It's perfect for recording lectures, interviews, and meetings. The Micro-32 has these features:

**Voice Activated System** — records only when it detects sound so you can save tape and power.

**Three Power Options** — give you the choice of powering your recorder with two AA batteries, standard AC power (requires optional AC adapter), or a vehicle battery (requires optional DC adapter).



**Two Tape Speeds** — let you record and play back the tape at slow speed for twice the recording/playback time or at normal speed for better sound quality.



**Built-In Condenser Microphone** — lets you record without an external microphone.

**Counter/Cue/Review** — help you find a tape section.

**Automatic Level Control** — automatically adjusts the recording level.

**DC Bias Circuit** — ensures a high signal-to-noise ratio and low distortion during recording.

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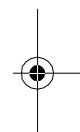
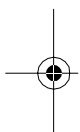


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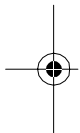
## **POWER SOURCES**



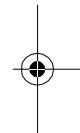
You can power the recorder from any of the following sources:

- Two AA batteries
- AC power (using an AC adapter)
- Vehicle battery power (using a DC adapter)

## **INSTALLING BATTERIES**



You can use two AA batteries (not supplied) to power the recorder. For the best performance, we recommend alkaline batteries, such as RadioShack Cat. No. 23-552. You can also use two AA nickel-cadmium batteries, such as Cat. No. 23-125, and recharge them with a nickel-cadmium charger, such as Cat. No. 23-133.



Follow these steps to install batteries.

1. Remove the battery compartment cover by sliding it in the direction of the arrow.
2. Insert the batteries in the battery compartment, as indicated by the polarity symbols (+ and -) inside the compartment.

Illustration



3. Replace the cover.

4





**Cautions:**

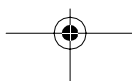
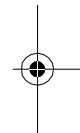
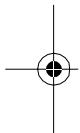
- Use only fresh batteries of the required size and type.
- Remove the batteries if the recorder will not be used for a few weeks or more. Batteries can leak chemicals and damage the recorder.

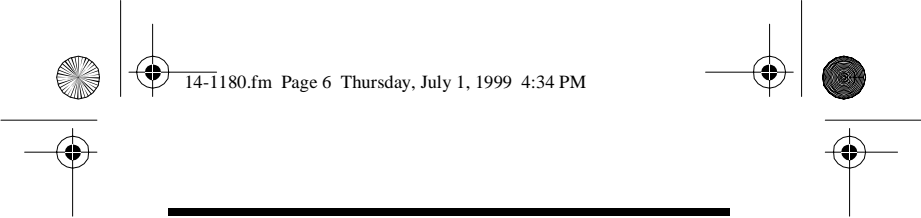
Replace the batteries if the REC/BATT indicator dims or does not light.

**USING AC POWER**

You can use an AC adapter, such as Cat. No. 273-1654A, to power the recorder from standard AC power.

**Caution:** You must use an adapter that supplies 3 volts with the center tip set to positive, delivers the 300 milliamps the recorder draws, and has a plug that correctly fits the recorder's **DC 3V** jack. The recommended adapter meets these requirements. Using an adapter that does not meet these specifications could seriously damage the recorder or the adapter.





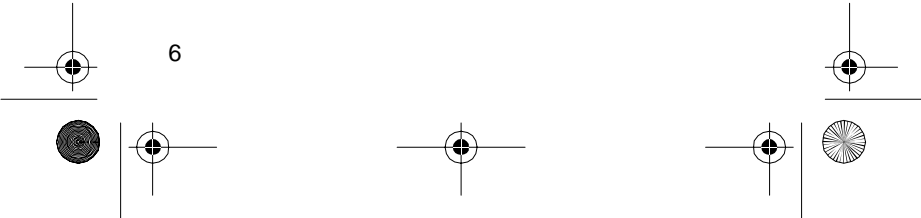
Follow these steps to power the recorder from AC power.

1. Set the adapter's voltage switch to 3V.
2. Insert the orange-tipped adapter plug into the adapter's socket. Line up TIP on the socket with + (positive) on the plug.
3. Insert the adapter's barrel plug into the recorder's **DC 3V** jack.

Illustration

4. Insert the adapter's other plug into a standard AC outlet.

Illustration



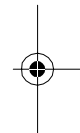
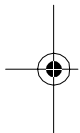


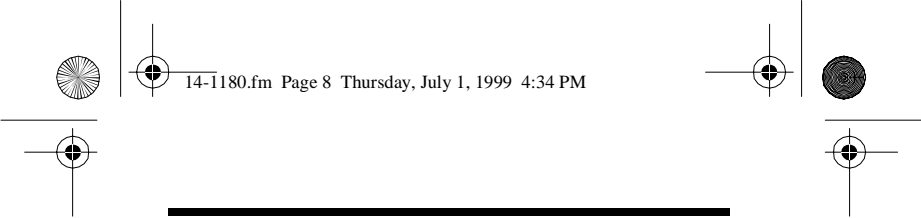
## USING VEHICLE BATTERY POWER

Using a DC adapter, such as Cat. No. 270-1560A, you can power the recorder from your vehicle's battery.

### Cautions:

- You must use an adapter that supplies 3 volts with the center tip set to positive, delivers the 300 milliamps the recorder draws, and has a plug that correctly fits the recorder's **DC 3V** jack. The recommended adapter meets these requirements. Using an adapter that does not meet these specifications could damage the recorder or the adapter.
- Always plug the adapter into the recorder before plugging it into the cigarette-lighter socket. Always unplug the adapter from the cigarette-lighter socket before unplugging it from the recorder.





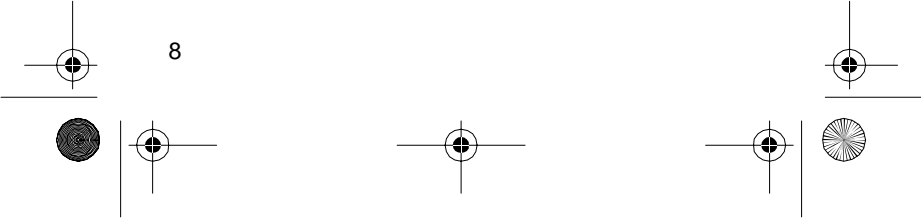
Follow these steps to power the recorder from your vehicle's battery.

1. Set the adapter's voltage switch to 3V.
2. Insert the orange-tipped adapter plug into the adapter's socket. Line up TIP on the socket with + (positive) on the plug.
3. Insert the adapter's barrel plug into the recorder's **DC 3V** jack.

Illustration

4. Insert the adapter's large plug into the vehicle's cigarette-lighter socket.

Illustration







## OPERATION

**Caution:** The tape stops and the recorder turns off when the tape reaches the end. However, we recommend that you press **STOP/EJ** as soon as possible after you finish playing or recording a tape. This protects the tape by releasing it from the tape-handling parts.

## LOADING A CASSETTE TAPE

**Note:** We recommend MC-60 cassette tapes (Cat. No. 44-640) for up to two hours of recording/playback time, or MC-90 cassette tapes (Cat. No. 44-644) for up to three hours of recording/playback time.

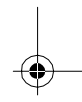
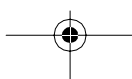
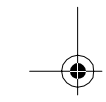
Follow these steps to load a cassette tape.

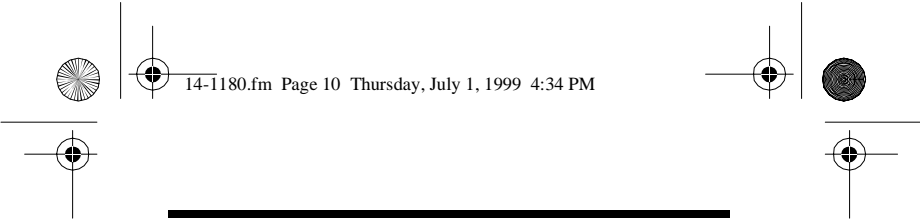
1. Use a pencil to turn the cassette's hub and remove any tape slack. Avoid touching the tape.

Illustration

2. Press **STOP/EJ** to open the cassette compartment.

Illustration





3. Slide the cassette into the grooves on the inside of the compartment cover, with the side you want to play or record on against the cover and the exposed tape facing outward.

Illustration

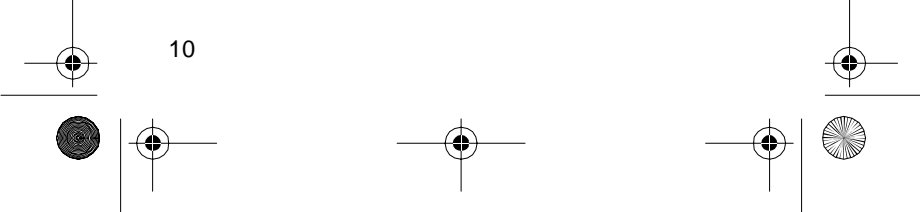
4. Close the compartment.

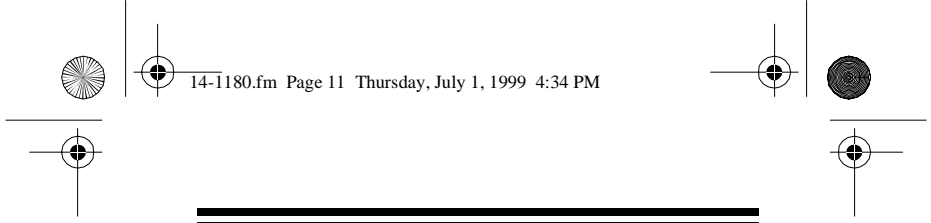
To unload the tape, press **STOP/EJ** to stop recording or playback, then press **STOP/EJ** again to open the cassette compartment so you can remove the tape.

**RECORDING**

**Cautions:**

- Do not change the tape speed while recording.
- You will damage the recorder if you force down **REC** when an erase-protection tab is not in place (see "Preventing Accidental Erasure").



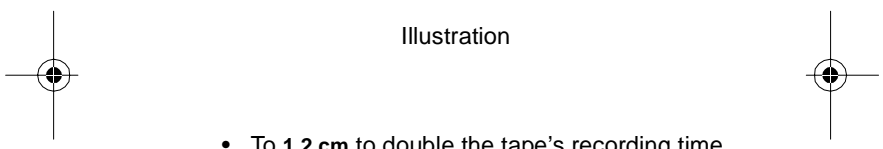


### Normal Recording

1. Set **VOX** to **OFF**.

Illustration

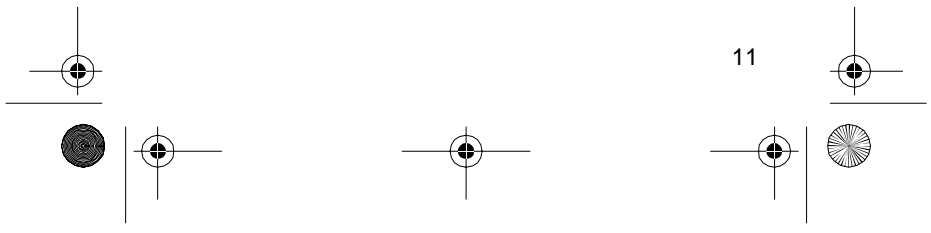
2. Load the cassette tape.
3. Set **TAPE SPEED** as follows:

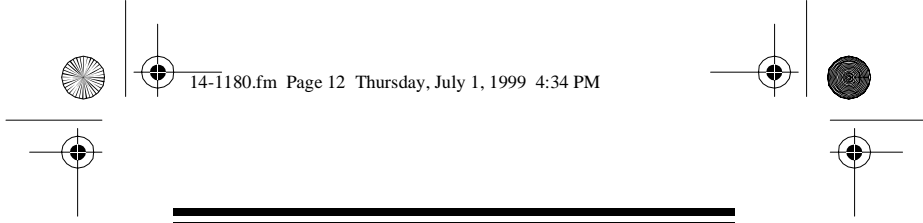


Illustration

- To **1.2 cm** to double the tape's recording time.
  - To **2.4 cm** for better sound quality.
4. Press **REC** to begin recording. This also pushes down **PLAY**.

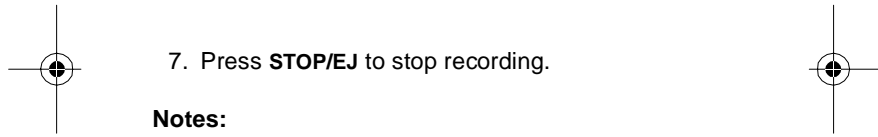
Illustration





5. Adjust **VOLUME** for the microphone sensitivity.
  - Minimum to mid-range for dictation
  - Mid-range to maximum for recording conferences
6. Place the recorder as close to the sound source as possible, with nothing between the source and the recorder to block the sound.

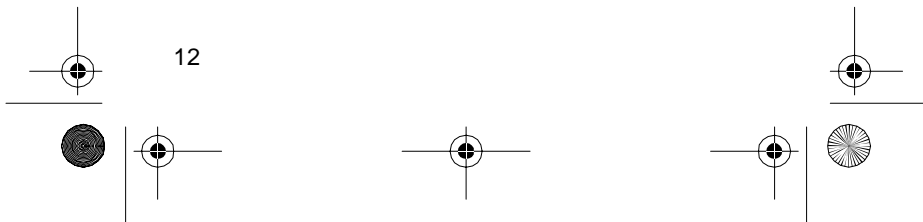
Illustration

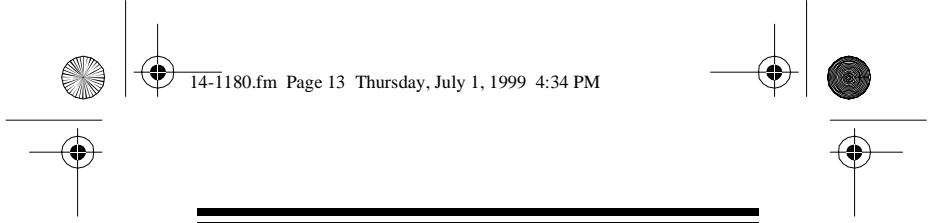


**Notes:**

- The built-in automatic level control automatically sets the recording level.
- To temporarily stop recording, slide **PAUSE** to **ON**. To resume recording, slide **PAUSE** back to its original position.

Illustration



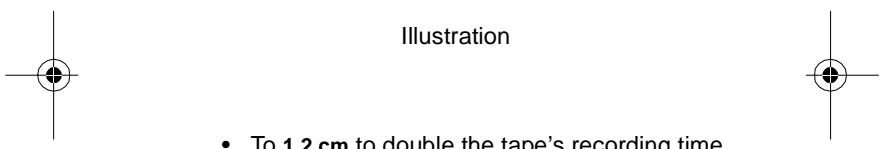


### Voice Activated Recording

1. Set the **VOX** to **ON**.

Illustration

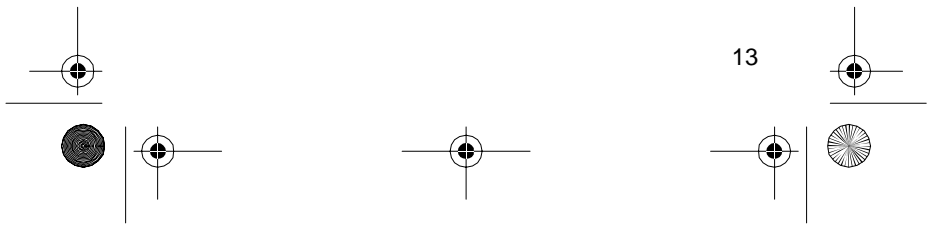
2. Load the cassette tape.
3. Set **TAPE SPEED** as follows:

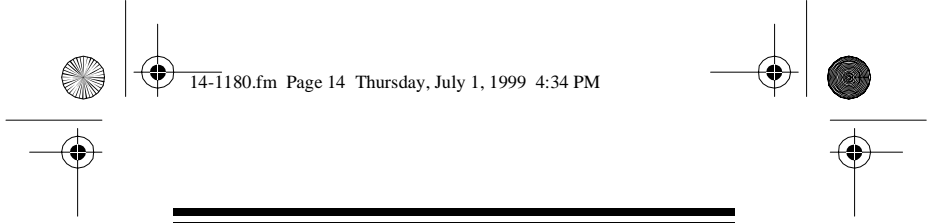


Illustration

- To **1.2 cm** to double the tape's recording time.
  - To **2.4 cm** for better sound quality.
4. Press **REC** to record. This also pushes down **PLAY**.

Illustration





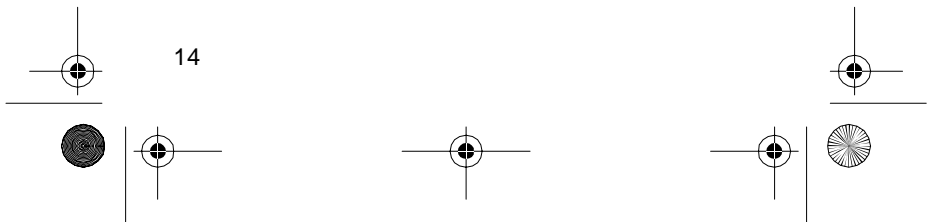
5. Adjust **VOLUME** for the microphone sensitivity until the sound source's volume level starts the recorder.

Illustration

**Notes:**

- The built-in automatic level control automatically sets the recording level.
- The first few sounds start the recorder but might not be recorded. Say an extra word or two to begin recording.
- When the recorder detects silence for 2 to 6 seconds, recording stops temporarily. When the sound resumes, recording continues.

6. Press **STOP/EJ** to stop recording.





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## Recording with an External Microphone

1. Plug an optional external microphone into the **MIC** jack on top of the recorder. The built-in microphone is automatically disconnected.

**Note:** Your local RadioShack store has a wide selection of microphones, designed especially for microcassette recorders.

2. Follow the steps under "Normal Recording" or "Voice Activated Recording."

### Quick Record

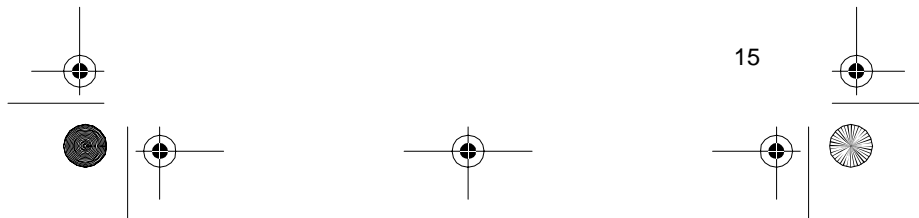
You can go directly from playback to recording by pressing **REC**.

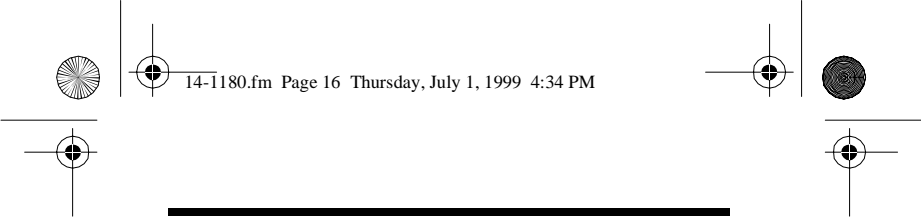
## PLAYING A TAPE

Follow these steps to play back a cassette tape.

1. Load the cassette tape.
2. Set **TAPE SPEED** to the speed you used when you recorded the tape.

Illustration





3. Press **PLAY**.
4. Adjust **VOLUME** to a comfortable listening level.
5. Press **STOP/EJ** to stop playback.

**Notes:**

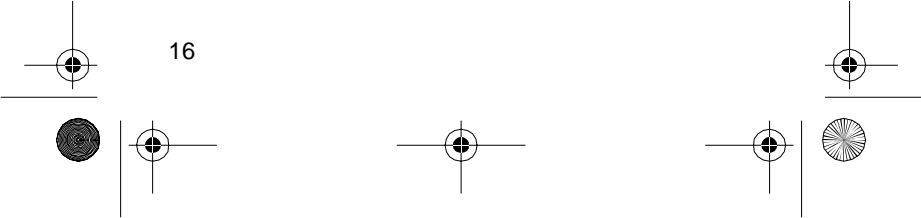
- To play the other side of the tape, unload it, turn it over, and reload it.
- To temporarily stop the tape, slide **PAUSE** to **ON**. To resume playback, slide **PAUSE** downward.

## USING FAST-F/CUE AND REW/REVIEW

Press the switch toward **FAST-F/CUE** to rapidly move a tape forward, or toward **REW/REVIEW** to rapidly move a tape backward.

Illustration

If you press and hold the switch toward **FAST-F/CUE** or **REW/REVIEW** during playback, you can hear the tape as it fast-forwards or rewinds. When you release the switch, the recorder resumes normal playback.





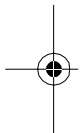


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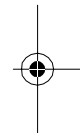
If you press and hold the switch toward **FAST-F/CUE** or **REW/REVIEW** during recording, the **REC** button releases. You can hear the tape as it fast-forwards or rewinds. When you release the switch, the recorder begins normal playback.

If you press the switch toward **FAST-F/CUE** or **REW/REVIEW** while the tape is stopped, the tape advances or rewinds until you press **STOP/EJ**.

**Note:** When the tape reaches the end, press **STOP/EJ** to release the **FAST-F/CUE** or **REW/REVIEW** switch.



## DIGITAL TAPE COUNTER



1. Load a cassette and rewind it to its beginning.
2. Press the reset button to reset the tape counter to 000.

### Illustration

3. Make a note of the counter readings at the beginning of each selection (during playback and recording).
4. Use the counter readings and the **FAST-F/CUE—REW/REVIEW** switch to quickly locate a desired position on the tape.





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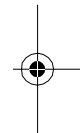
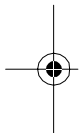
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## USING AN EARPHONE

For private listening, plug an optional earphone with a 1/8-inch plug into the recorder's **EAR** jack. This automatically disconnects the recorder's internal speaker.

Illustration

**Note:** Your local RadioShack store has a wide selection of earphones.



### Listening Safely

To protect your hearing, follow these guidelines when you use earphones.

- Set the volume to the lowest setting before you begin listening. After you begin listening, adjust the volume to a comfortable level.
- Do not listen at extremely high volume levels. Extended high-volume listening can lead to permanent hearing loss.
- Once you set the volume, do not increase it. Over time, your ears adapt to the volume level, so a volume level that does not cause discomfort might still damage your hearing.





## TAPE HINTS

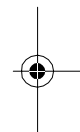
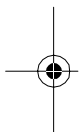


### STORING CASSETTE TAPES

Do not expose cassette tapes to high temperatures; high humidity; dust or dirt; or motors, transformers, or other sources of strong magnetic fields.

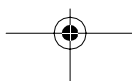
### PREVENTING ACCIDENTAL ERASURE

Most microcassette tapes have an erase-protection tab for each side of the tape. To protect your recordings from being accidentally erased or recorded over, use a screwdriver to carefully break off the erase-protection tabs. If you later decide to erase or record over the tape, place a piece of tape over the holes.



Illustration

**Caution:** Removing the erase-protection tabs does not prevent a tape from being erased by a bulk tape eraser.





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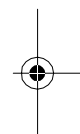
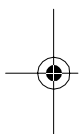
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## ERASING A CASSETTE TAPE

If you no longer want a recording, you can record over it or erase it.

To record over a cassette tape, be sure the erase-protection tabs are in place. Then simply record as usual. The recorder records over the previous recording.

You might prefer to use a bulk tape eraser, such as Cat. No. 44-233, which erases both sides of a micro-cassette tape in just a few seconds.



## RESTORING TAPE TENSION AND SOUND QUALITY

After you play a cassette tape several times, the tape might become tightly wound on the reels. This can cause playback sound quality to deteriorate.

To restore the sound quality, fast-forward the tape from the beginning to the end of one side, then completely rewind it. Then loosen the tape reels by gently tapping each side of the cassette's outer shell on a flat surface.

**Caution:** Be careful not to damage the cassette when tapping it. Do not touch the exposed tape or allow any sharp objects near the cassette.





## **MAINTENANCE**

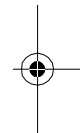
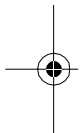
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Your Optimus Micro-32 Microcassette Tape Recorder with Voice Activation and Counter is an example of superior design and craftsmanship. The following suggestions will help you care for your recorder so you can enjoy it for years.

- Keep the recorder dry. If it gets wet, wipe it dry immediately. Liquids can contain minerals that can corrode the electronic circuits.
- Handle the recorder gently and carefully. Dropping it can damage the circuit boards and case and can cause the recorder to work improperly.
- Use and store the recorder only in normal temperature environments. Temperature extremes can shorten the life of electronic devices and distort or melt plastic parts.
- Keep the recorder away from dust and dirt, which can cause premature wear of parts.
- Wipe the recorder with a damp cloth occasionally to keep it looking new. Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the recorder.
- Use only fresh batteries of the recommended size and type. Always remove old or weak batteries; they can leak chemicals that destroy electronic circuits.



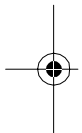


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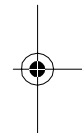
Modifying or tampering with the recorder's internal parts can cause a malfunction and might invalidate your recorder's warranty. If your recorder is not operating as it should, take it to your local RadioShack store for assistance.

## CLEANING THE TAPE-HANDLING PARTS

Clean the tape-handling parts after every 20 hours of use.



With power supplied and the cassette removed, open the cassette compartment door. Use a pointed object to gently push the erase protection tab sensor to the left, and press **REC** to expose the tape-handling parts. Use a cotton swab dipped in tape head cleaning solution or denatured alcohol to gently clean the tape-handling parts.

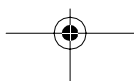


Illustration

Or, for easier cleaning, use RadioShack's microcassette cleaner kit (Cat. No. 44-1168), which includes a special cleaning cassette.

After you finish cleaning, press **STOP/EJ**.

22





## **SPECIFICATIONS**



Tape System..... 2-Track Monaural Microcassette

Tape Speed ..... 2.4 cm/sec or 1.2 cm/sec

Recording Time (Total for Both Sides):

MC-60 .....60 min @ 2.4 cm/sec  
120 min @ 1.2 cm/sec

MC-90 .....90 min @ 2.4 cm/sec  
180 min @ 1.2 cm/sec

Wow and Flutter.....Less than 0.3% @ 2.4 cm/sec

Erase System .....Permanent Magnet Erasing

Record System ..... DC Bias

Power Requirements ..... 2 AA Batteries, or  
120 V AC (With Optional AC Adapter), or  
3 V DC (With Optional DC Adapter)

Battery Life\*:

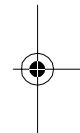
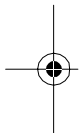
Alkaline Batteries ..... 12 Hours  
Nickel-Cadmium Batteries.....9 Hours

Dimensions (HWD).....  $5\frac{1}{16} \times 1 \times 2\frac{5}{8}$  Inches  
(129 × 25.4 × 67 mm)

Weight.....5.8 oz  
(164 g)

\* Battery life varies depending on temperature, usage patterns, and other conditions.

Specifications are typical; individual units might vary. Specifications are subject to change and improvement without notice.



### Limited Ninety-Day Warranty

This product is warranted by RadioShack against manufacturing defects in material and workmanship under normal use for ninety (90) days from the date of purchase from RadioShack company-owned stores and authorized RadioShack franchisees and dealers. EXCEPT AS PROVIDED HEREIN, RadioShack MAKES NO EXPRESS WARRANTIES AND ANY IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE DURATION OF THE WRITTEN LIMITED WARRANTIES CONTAINED HEREIN. EXCEPT AS PROVIDED HEREIN, RadioShack SHALL HAVE NO LIABILITY OR RESPONSIBILITY TO CUSTOMER OR ANY OTHER PERSON OR ENTITY WITH RESPECT TO ANY LIABILITY, LOSS OR DAMAGE CAUSED DIRECTLY OR INDIRECTLY BY USE OR PERFORMANCE OF THE PRODUCT OR ARISING OUT OF ANY BREACH OF THIS WARRANTY, INCLUDING, BUT NOT LIMITED TO, ANY DAMAGES RESULTING FROM INCONVENIENCE, LOSS OF TIME, DATA, PROPERTY, REVENUE, OR PROFIT OR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, EVEN IF RadioShack HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Some states do not allow the limitations on how long an implied warranty lasts or the exclusion of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

In the event of a product defect during the warranty period, take the product and the RadioShack sales receipt as proof of purchase date to any RadioShack store. RadioShack will, at its option, unless otherwise provided by law: (a) correct the defect by product repair without charge for parts and labor; (b) replace the product with one of the same or similar design; or (c) refund the purchase price. All replaced parts and products, and products on which a refund is made, become the property of RadioShack. New or reconditioned parts and products may be used in the performance of warranty service. Repaired or replaced parts and products are warranted for the remainder of the original warranty period. You will be charged for repair or replacement of the product made after the expiration of the warranty period.

This warranty does not cover: (a) damage or failure caused by or attributable to acts of God, abuse, accident, misuse, improper or abnormal usage, failure to follow instructions, improper installation or maintenance, alteration, lightning or other incidence of excess voltage or current; (b) any repairs other than those provided by a RadioShack Authorized Service Facility; (c) consumables such as fuses or batteries; (d) cosmetic damage; (e) transportation, shipping or insurance costs; or (f) costs of product removal, installation, set-up service adjustment or reinstallation.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

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